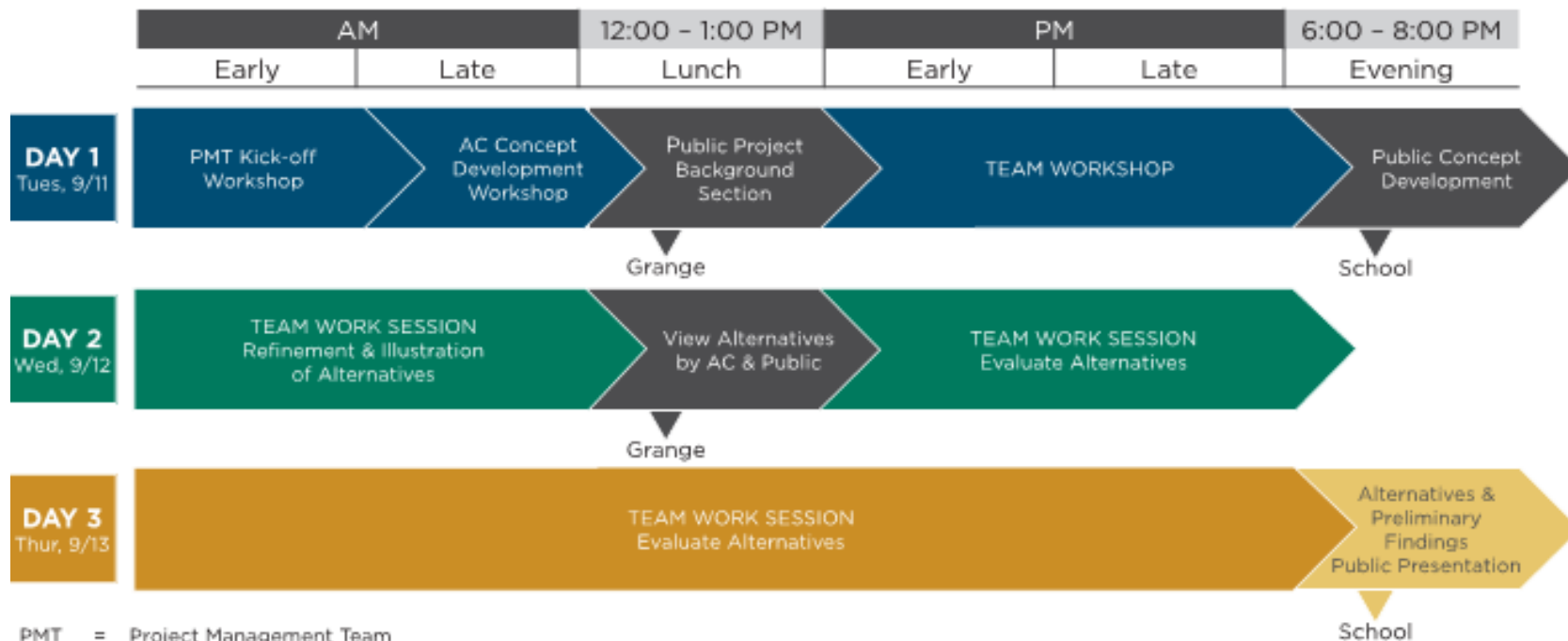




Workshop Purpose

- **Why are we here?**
 - **Provide information to allow the public and stakeholders to make informed decisions regarding study area improvements**
 - **Understand the three key project elements: corridor alignment, intersections, and highway transitions**
 - **Develop conceptual solutions**
 - **Gather comments and feedback**

Three-Day Workshop Format



PMT = Project Management Team

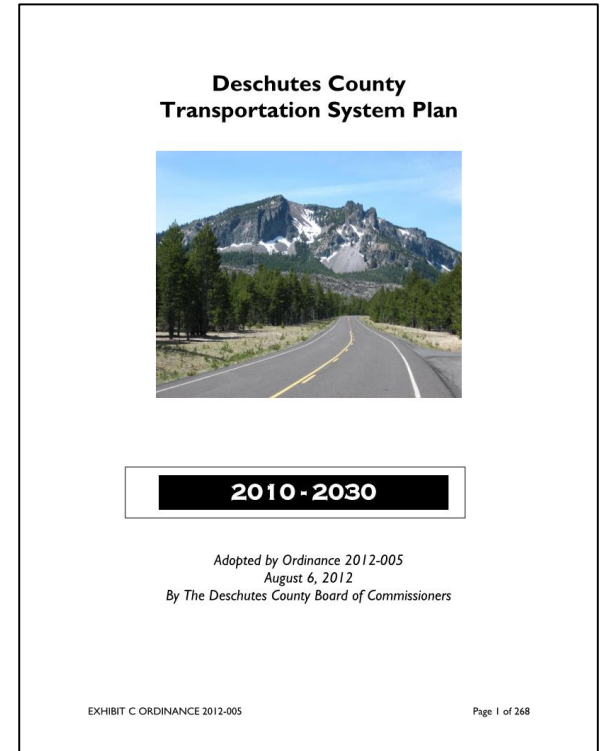
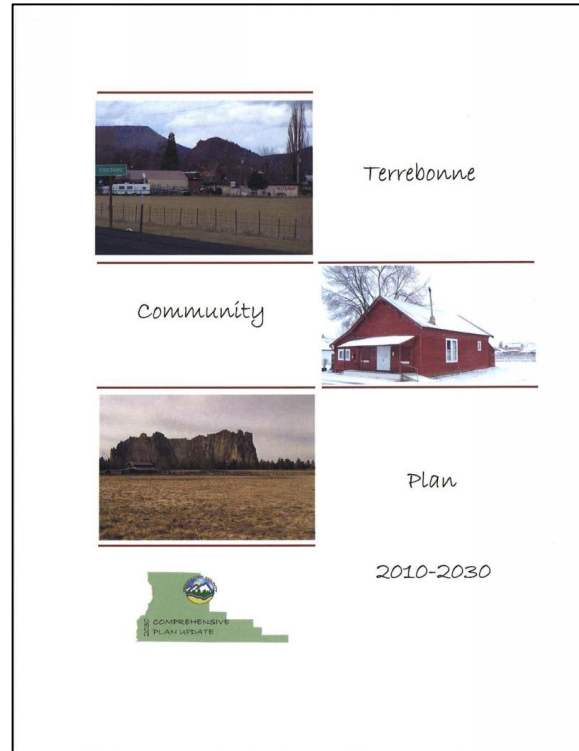
AC = Advisory Committee

Concept Design Workshop Agenda

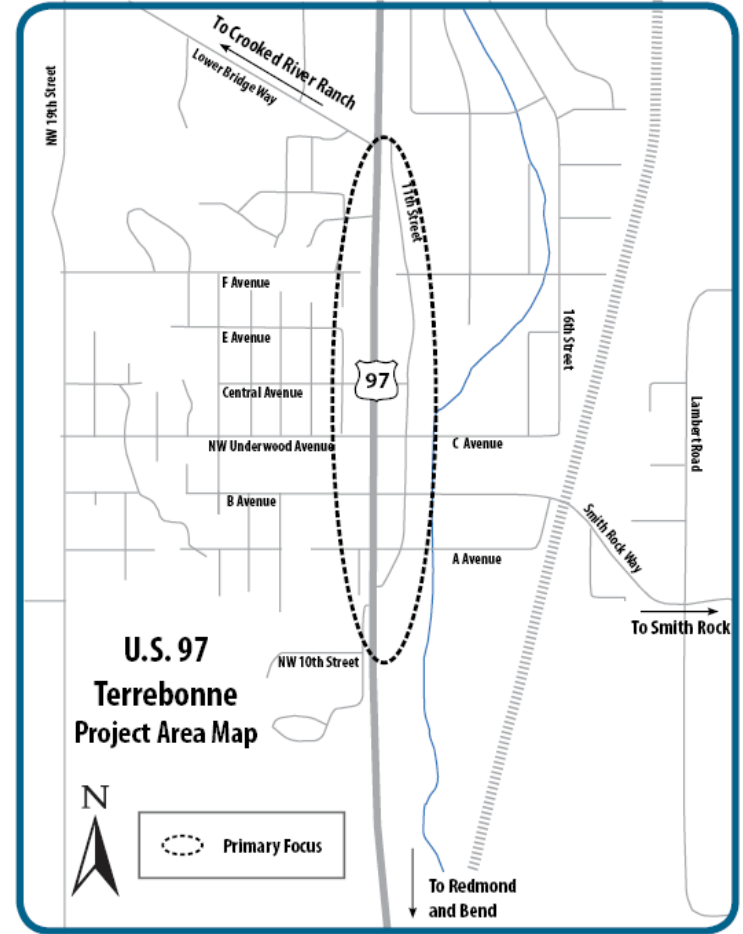
Welcome & Agenda Overview	<i>Cari Charlton</i>
Project Background	<i>Marc Butorac</i>
Project Goals, Objectives, and Evaluation Criteria	<i>Marc Butorac</i>
Work and Activities Completed to Date	<i>Marc Butorac</i>
Overview of Existing and Future Transportation System Needs	<i>Marc Butorac</i>
Workshop Overview and Project Elements	<i>Marc Butorac</i>
Alignment Element Workstation (Gym)	<i>Marc Butorac</i>
Intersection Element Workstation (Cafeteria)	<i>Brian Ray</i>
Transition Element Workstation (Cafeteria)	<i>Matt Kittelson</i>

Project Background

- Needs in Terrebonne have been well documented
- \$20 Million in funding has been allocated by HB 2017 and is in 2018-2021 Statewide Transportation Improvement Program



Study Area



Project Elements & Desired Outcomes



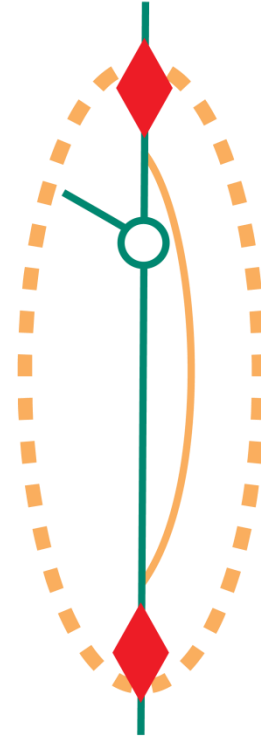
Corridor Alignments



Intersections



Highway Transition



Potential Adoption Process Outcomes

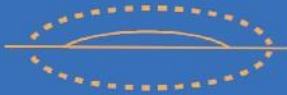
Path 1



Refinement
Plan

A Refinement Plan requires **Deschutes County Board of Commissioners** to amend the County's Transportation System Plan.

Path 2



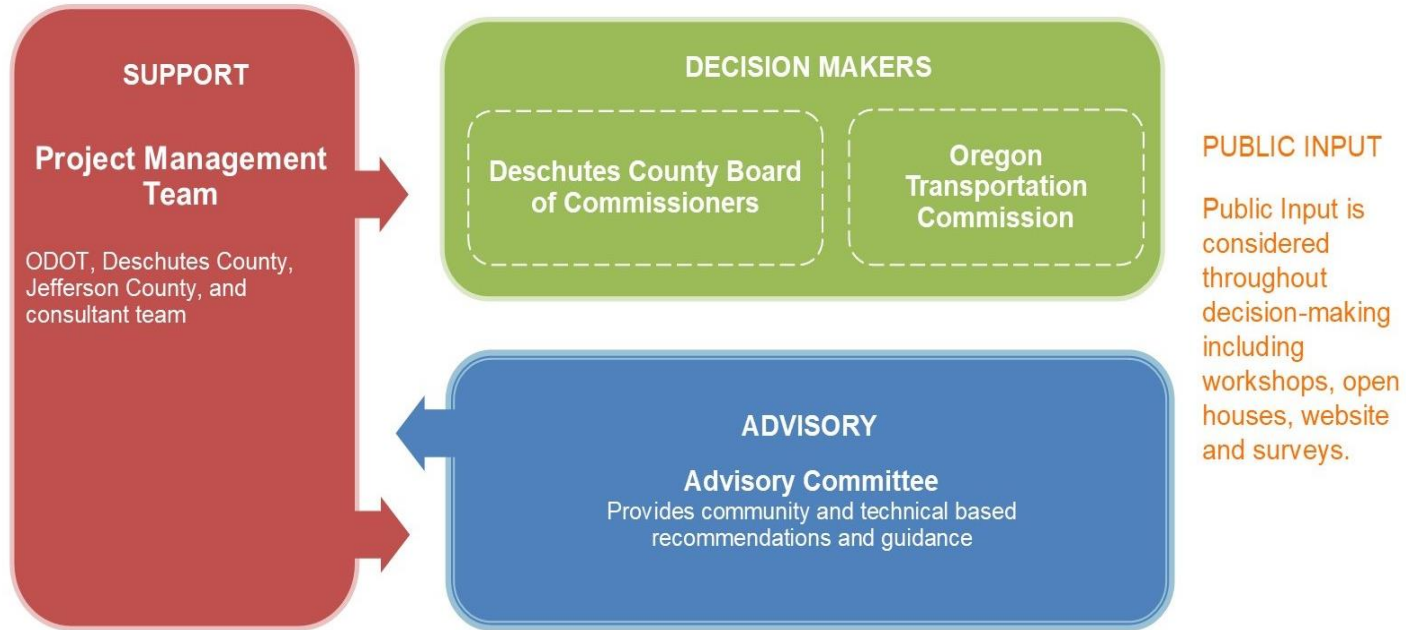
If alignment improvements occur off of US 97, such as a couplet or bypass, a Facility Plan is required. The Deschutes County Board of Commissioners will amend its TSP and the Oregon Transportation Commission will amend the Oregon Highway Plan.

Path 3



If an interchange is developed at the US 97/Lower Bridge Way intersection, an Interchange Area Management Plan is required. The Deschutes County Board of Commissioners will amend its TSP and the Oregon Transportation will amend the Oregon Highway Plan.

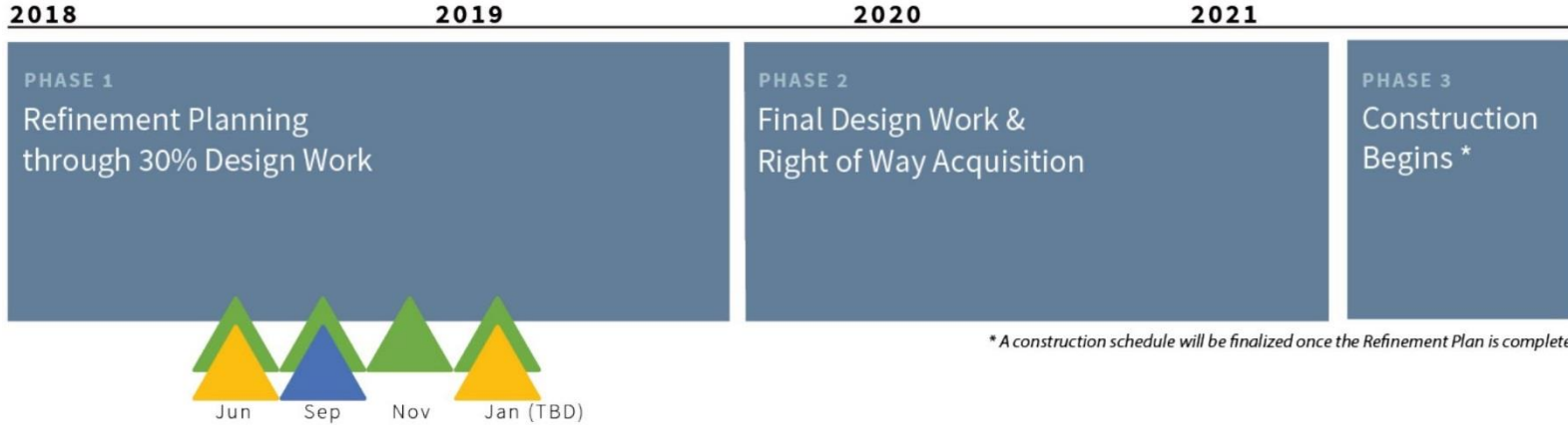
Decision-making process



Advisory Committee Members

Member Name	Affiliation
John Williams	Crooked River Ranch and Greater Terrebonne Citizens' Action Committee
Mark Swick	Terrebonne Hardware (Business Representative)
Chuck Forward	Bike/Ped Representative
Mike McIntosh	Redmond School District
Peter Russell	Deschutes County Planning
Captain Paul Garrison	Deschutes County Sheriff's Office
Cody Smith	Deschutes County Public Works
Mae Huston or Jeff Rasmussen	Jefferson County
Dale Crawford	Deschutes County Planning Commission
Phil Henderson	Deschutes County Board of Commissioners
Nick Kezele	Greater Terrebonne Citizens' Advisory Committee
Eric Sande	Tourism Representative
Scott Brown	Recreational Representative
Dylan Stott	Community Member At-Large
Randy Lunsford	Community Member At-Large
Kelsey Rook	Community Member At-Large

Schedule



** A construction schedule will be finalized once the Refinement Plan is complete.*

SCHEDULED MEETINGS

-  Advisory Committee Meeting
-  Concept Development Workshop
-  Public Meeting

Goals, Objectives, & Evaluation Criteria

- Community & Livability
- Mobility
- Safety and Health
- Accessibility
- Financial Responsibility
- Economic Vitality

Objective	Evaluation Criteria
<ul style="list-style-type: none"> • Increase transportation choices on US 97 by adding or improving bicycle and pedestrian routes, crossing, and connections to transit, including a crossing at US 97 & B Street which serves as a school crossing and scenic bike route crossing. • Link regional and local routes to key attractors on US 97, such as shopping, schools, residential areas, and other community destinations. • Provide a transportation network that accommodates local, commuter, and region traffic, including freight movements along US 97. 	<ul style="list-style-type: none"> • Does the proposed project element serve people that live in, work in, and/or visit Terrebonne? • Are there any significant barriers to or impacts that would result from the proposed project element, such as the presence of significant natural resources or require acquisition of property contaminated by Haz Mat? • Do the proposed project elements increase noise impacts to the neighbors or impact parks, schools or churches? • What are the right of way impacts of the proposed project element - # of businesses relocated, #of residential properties impacted, impacts to public facilities, etc.
<ul style="list-style-type: none"> • Evaluate all potential US 97 alternatives, such as maintaining the existing US 97 alignment, creating a highway couplet with 11th Street or constructing a bypass east or west of the existing alignment. • Identify and evaluate all potential at-grade and grade separated solutions for the Lower Bridge Way/US 97 intersection in concert with the development of the alternative alignments for US 97. • Maintain the carrying and dimensional capacity for statewide freight movement on US 97. 	<ul style="list-style-type: none"> • Does the proposed project element meet mobility targets on US97 through 2040? • Does the proposed project element represent an investment that works toward the long-term solution for the corridor? • Does the proposed project element maintain or enhance the carrying and dimensional capacity for statewide freight movement? • Does the proposed project element enhance east-west connectivity within the community?
<ul style="list-style-type: none"> • Address safety, comfort, and security of people driving, walking, and biking along and across US 97. • Use transitional and traffic calming techniques to slow traffic to posted speeds. 	<ul style="list-style-type: none"> • Does the proposed project element address an area with a crash history or risk factor? Is it expected to improve safety or slow speeds? • Does the proposed project element reduce the level of stress experienced by pedestrians and/or cyclists?
<ul style="list-style-type: none"> • Address the identified existing and future year 2040 gaps and deficiencies (needs) within the study area. • Provide well-designed, visible, safe, and convenient infrastructure and crossings for all users (e.g., agricultural equipment). 	<ul style="list-style-type: none"> • Does the proposed project element address existing gap or deficiency in the vehicular, transit, bicycle and/or pedestrian network?
<ul style="list-style-type: none"> • Achieve maximum return on the \$20 million allocated for improvements in the Terrebonne community 	<ul style="list-style-type: none"> • What is the planning-level cost estimate of the proposed project element? • Can the preferred plan be implemented with the money allocated? • Does the benefit exceed the cost over a 20-year horizon?
<ul style="list-style-type: none"> • Provide connections to businesses and natural areas within and near the Terrebonne community. • Attract tourist and investment dollars to the greater Terrebonne community 	<ul style="list-style-type: none"> • Does the proposed project element address mobility and serviceability for local and regional freight activity? • Does the proposed project element support business activity in and around the community (e.g., the Smith Rock State Park)? • Does the proposed project element improve pedestrian and/or bicycle access to businesses and natural areas in and around the community?

Work & Activities Completed to Date

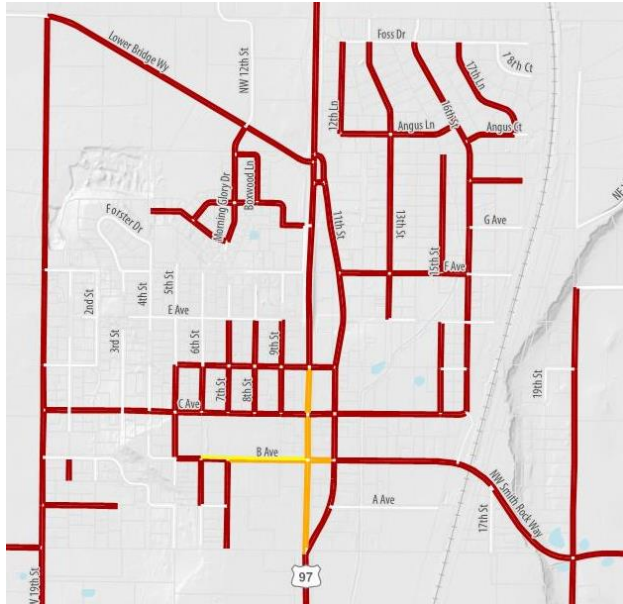
- Stakeholder Meetings
- Advisory Committee Meetings
- Public Meeting #1
- Five Technical Memorandum
 - 1) Plans and Policy Review
 - 2) Analysis Methodology & Assumptions
 - 3) Goals, Objectives, and Evaluation Criteria
 - 4) Existing Conditions
 - 5) Future Conditions

Overview of Existing and Future Transportation System Needs

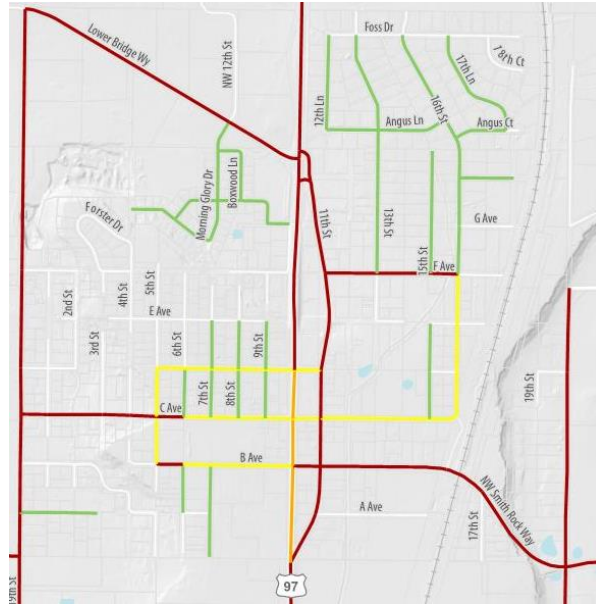
- How does the system operate today?
- How do we expect it to operate in the future?



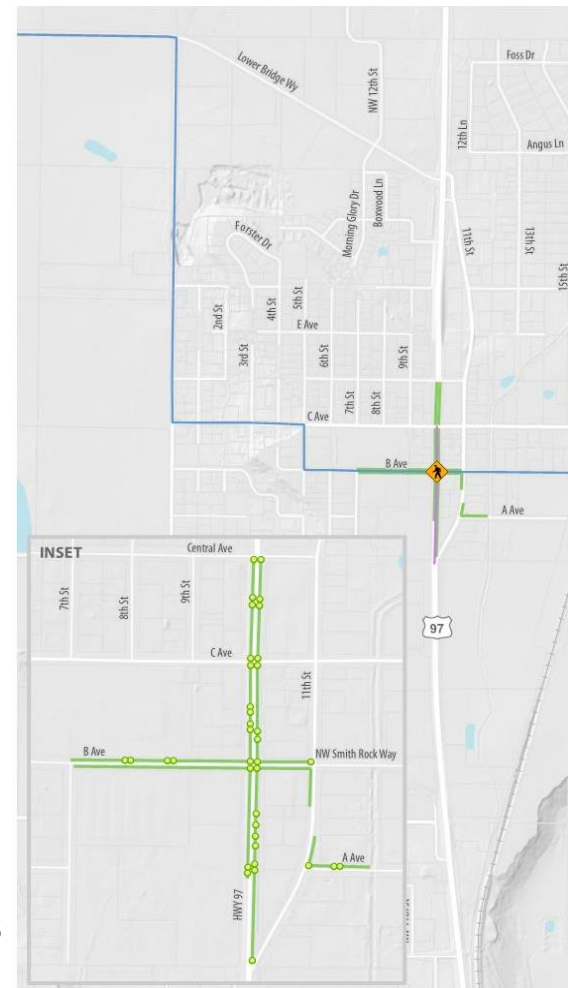
Existing Conditions – Multimodal Facilities



Bicycle Level of Traffic Stress



Pedestrian Level of Traffic Stress

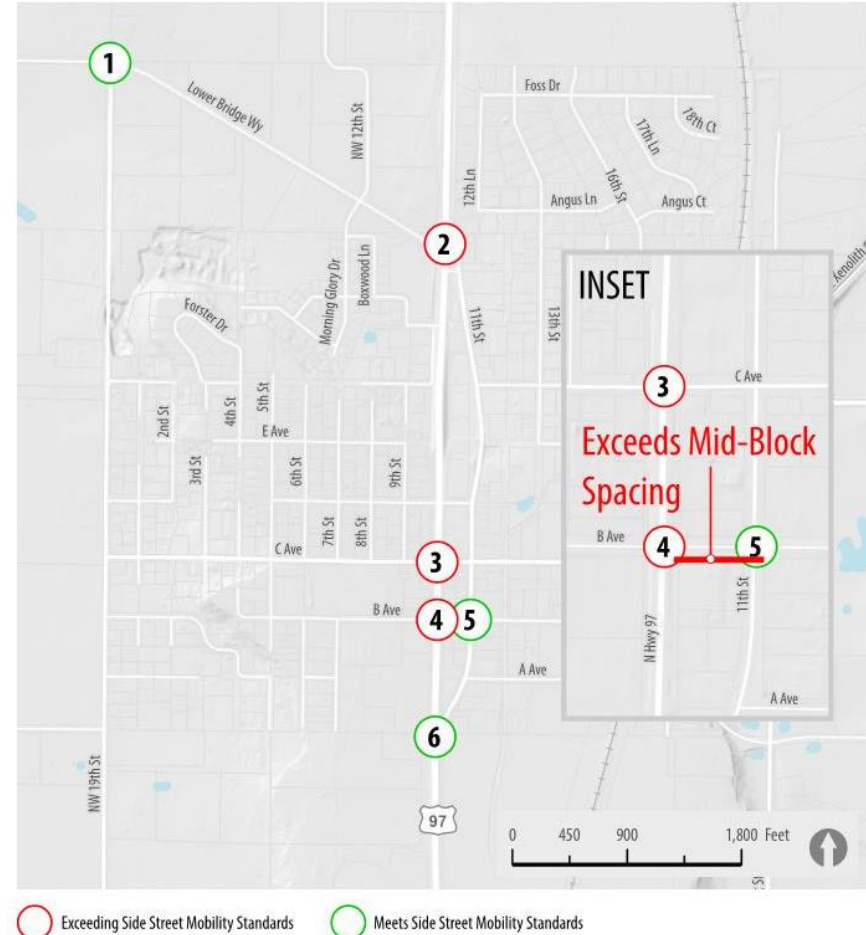


Existing Multimodal System

Existing Conditions – Intersection and Street Operations

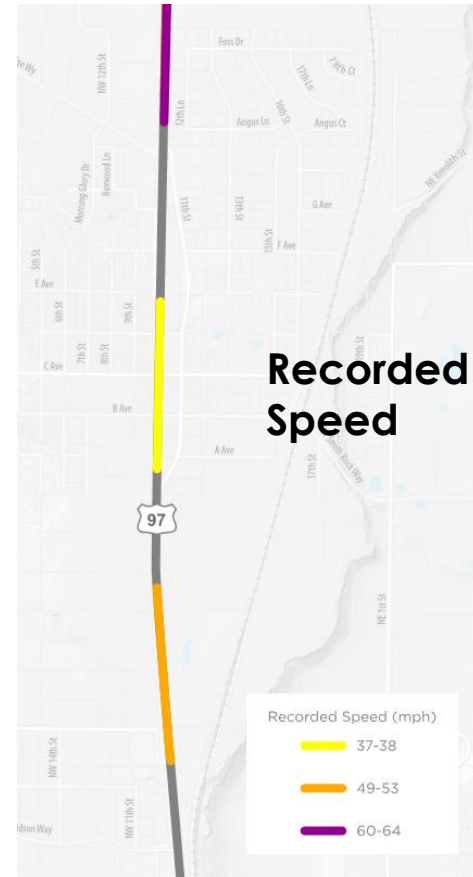
- System peaks in evening (4:00PM-5:00PM)
- Side street turning movements exceed mobility standards at:
 - Lower Bridge Way, C Ave, and B Ave
- 95th % queue exceeds mid block spacing for westbound movement at US 97/B Ave

Terrebonne Existing Weekday PM Operations



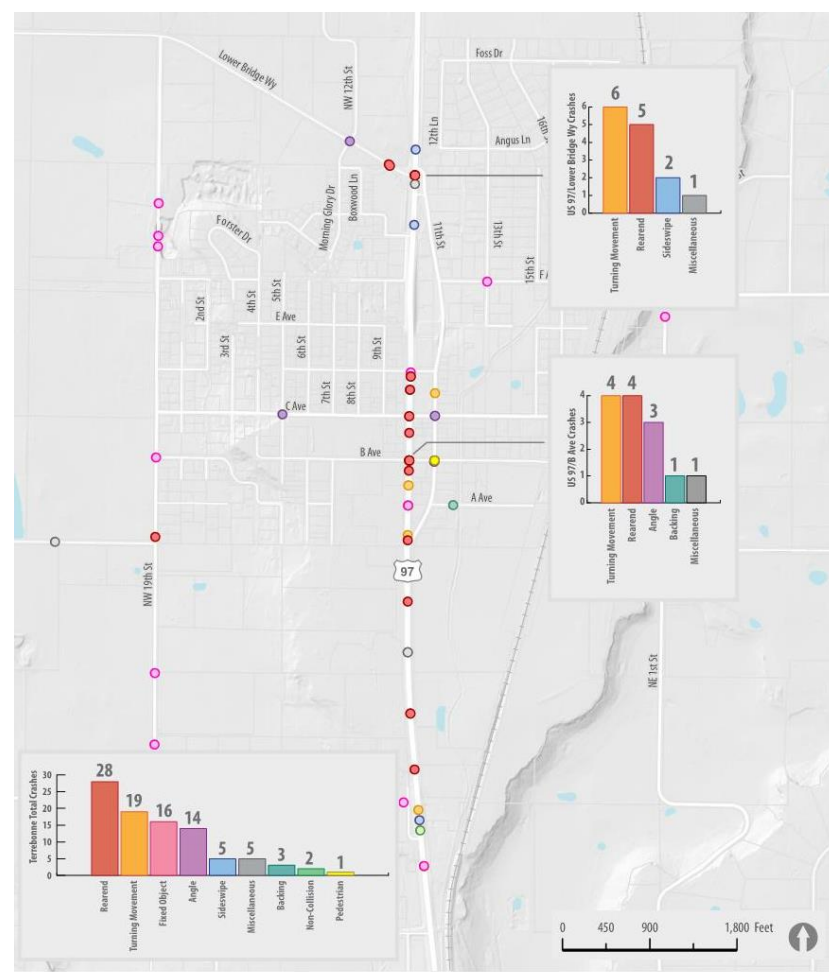
Existing Conditions - Speeds

- Recorded speed was higher than posted speed on US 97 at Lower Bridge Way (+19mph) and C Ave (+3mph)



Existing Conditions – Historical Crash Data

- 93 total crashes during 5 year study period
- No fatal crashes
 - 44% injury, 56% PDO
- 2 intersections exceeded ODOT critical crash rates
 - US 97/LBW
 - 11th St/Smith Rock Wy

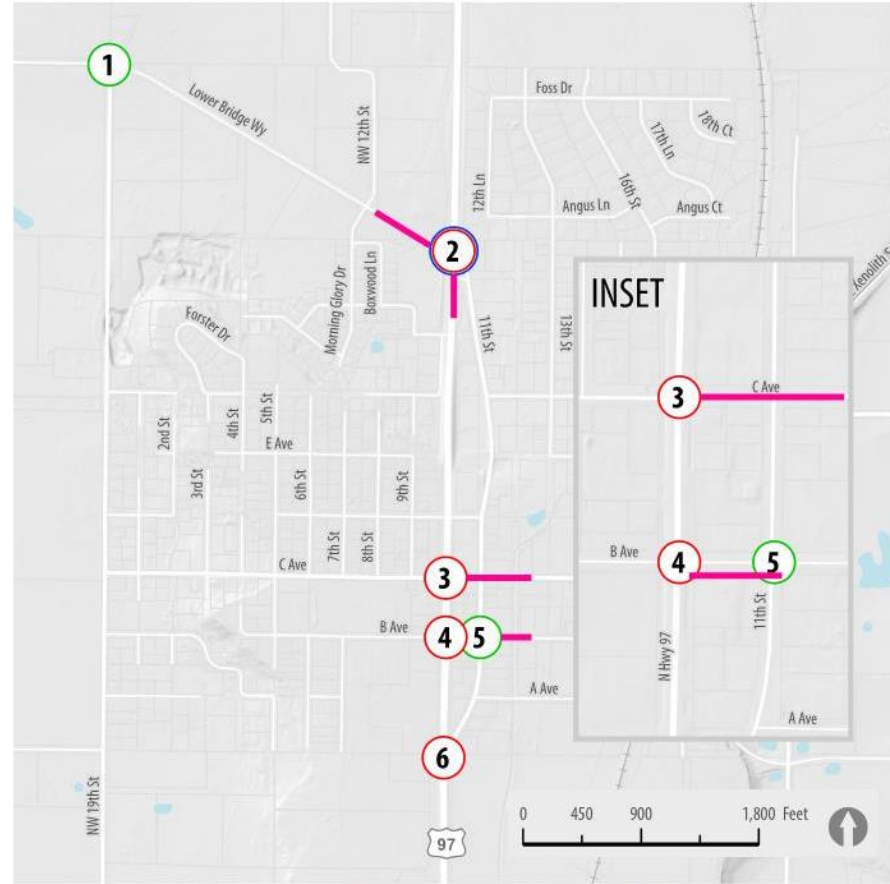


Over Dimensional Loads on US 97 2013-2015, Nov. 2017 – Aug. 2018

Number of Loads	Total	90
Width	Average	18 feet
	Max	26 feet
Length	Average	116 Feet
	Max	330 Feet
Weight	Average	220,000 lbs
	Max	818,680 lbs

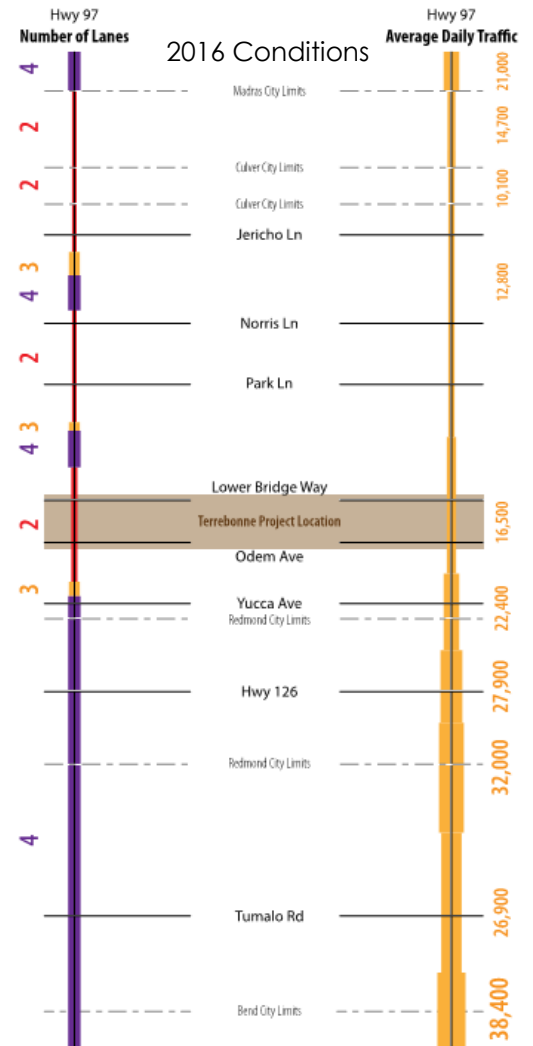
Future Conditions

- Additional intersections and movements exceed mobility standards:
 - Mainline at US 97/LBW
 - Side street at US 97/11th St
- 95th percentile queue exceeding storage at:
 - US 97/Lower Bridge Way, US 97/C Ave, US 97/B Ave, 11th St/Smith Rock Wy



US 97 Long-term Needs

- Average Daily Traffic (ADT) on US 97 through Terrebonne is anticipated to grow to 32,000 by 2040.
- This will meet or exceed the two-lane capacity of US 97 within Terrebonne.
- Truck traffic is also expected to remain high along the US 97 corridor.



Summary of Corridor Needs

- Highway demand will necessitate some form of 2 NB and 2 SB lanes
- Provide connectivity and access for all users in Terrebonne
- Address US97/Lower Bridge Way Capacity/Safety
- Address US97 / B Avenue Capacity
- US 97 is a key freight corridor



Workshop Overview & Project Elements



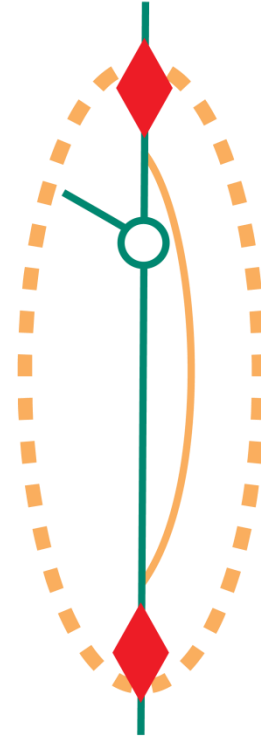
Corridor Alignments



Intersections



Highway Transition



Concept Alignment Element



Concept
Main Street



Concept
Couplets



Concept
Bypasses



Concept Alignment Questions



Questions to Consider:

- Where does the community ultimately want the highway alignment?
- What form should highway take to address long-term capacity and community needs?
- How do these alternative alignments fit within existing right-of-way, address future traffic needs, and meet the identified goals, objectives, and evaluation criteria?

Concept Alignment Tools



Workbook



3D Model

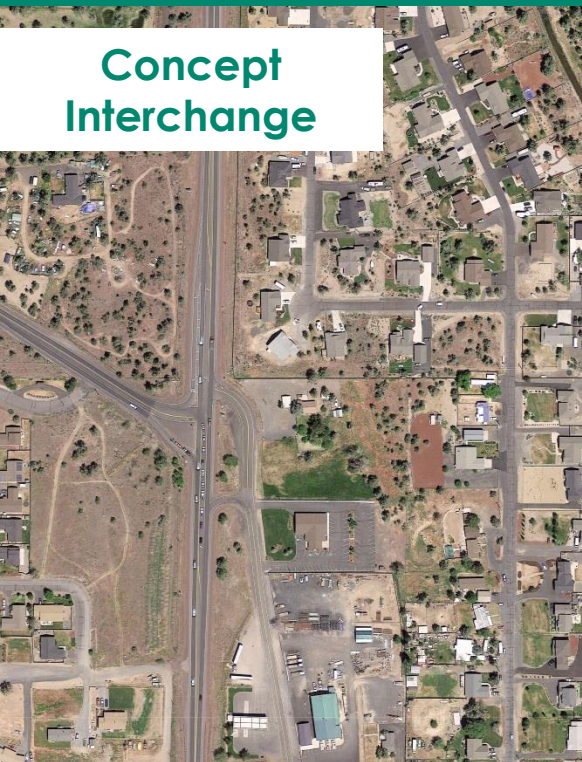


Floor Map

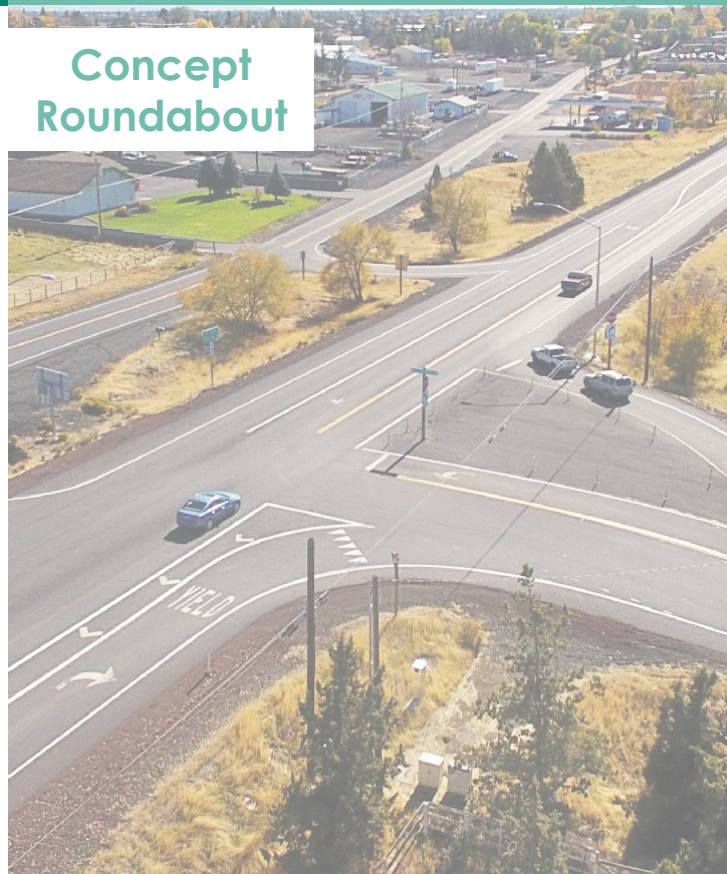


Concept Intersection Element

Concept Interchange



Concept Roundabout



Concept Alternative Intersections



Concept Intersection Element

Concept
Interchange



Concept Intersection Element

Concept
Roundabout



Concept Intersection Element

Concept
Roundabout



Concept Intersection Element

Concept Alternative Intersections



Concept Intersection Element



Concept Alternative
Intersections



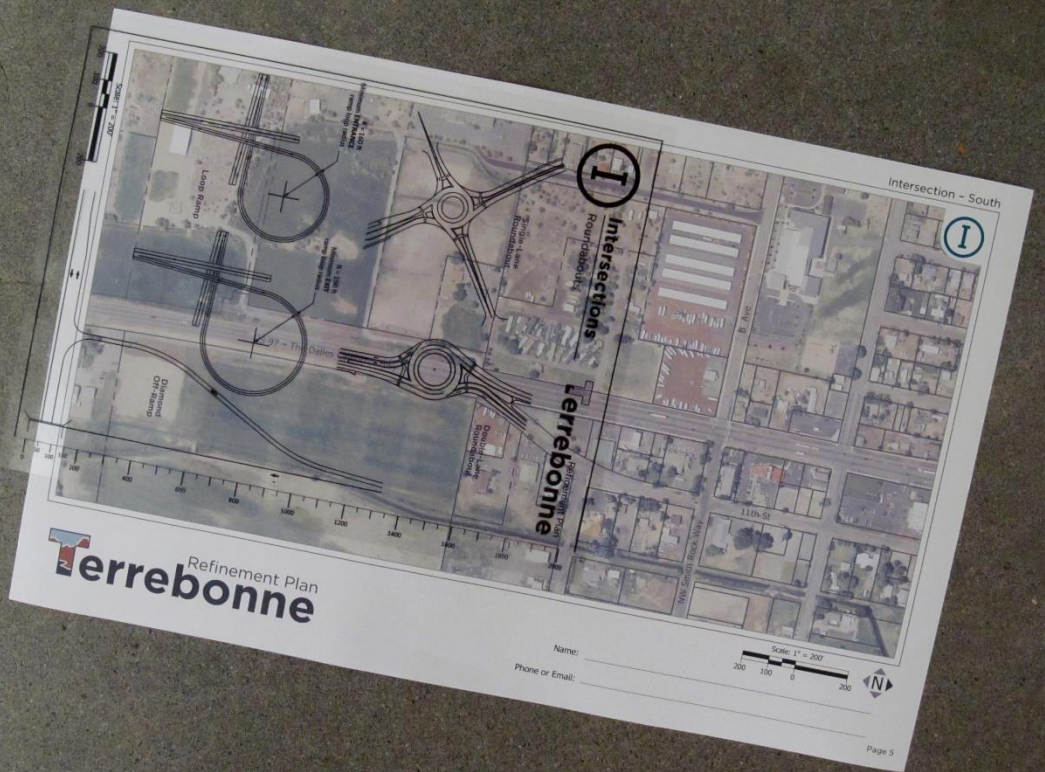
Concept Intersection Questions



Questions to Consider:

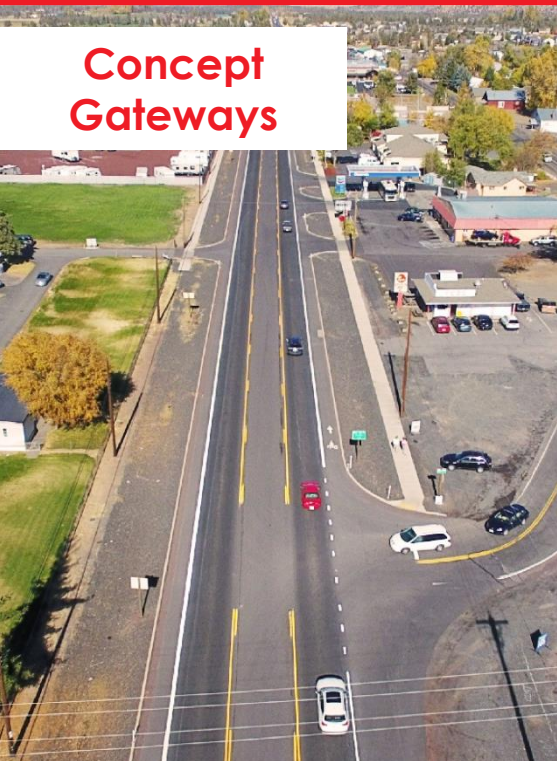
- What could be a viable intersection improvement at Lower Bridge Way/US 97?
- What other intersections need to be enhanced and what improvements are reasonable?
- How should pedestrians and bicyclists be accommodated at intersections?

Concept Intersection Tools

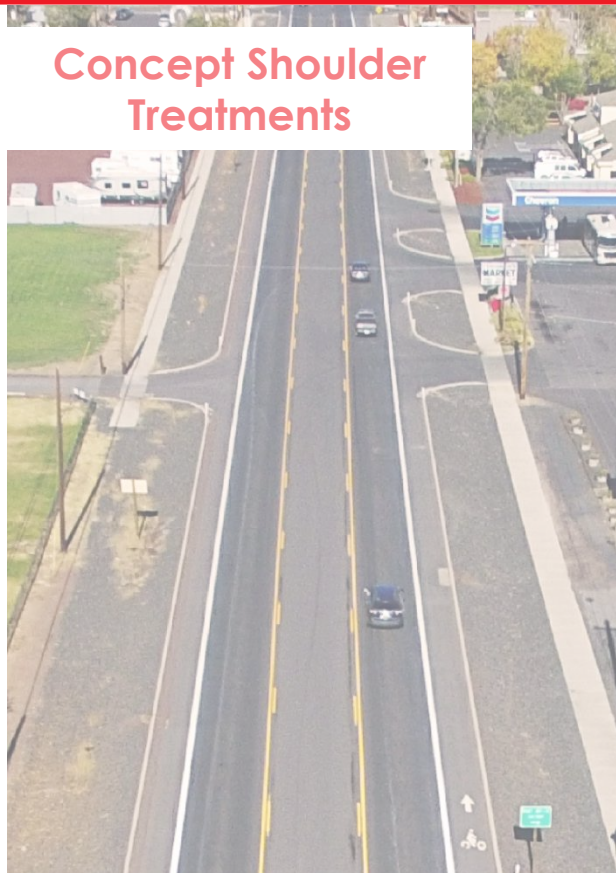


Concept Highway Transition Element

Concept Gateways



Concept Shoulder Treatments



Concept Distinct Transition Zones



Concept Highway Transition Element

Concept Gateways



Concept Highway Transition Element

Concept Gateways



Concept Shoulder Treatments



Concept Distinct Transition Zones



Concept Highway Transition Element

Concept Shoulder Treatments



Concept Highway Transition Element

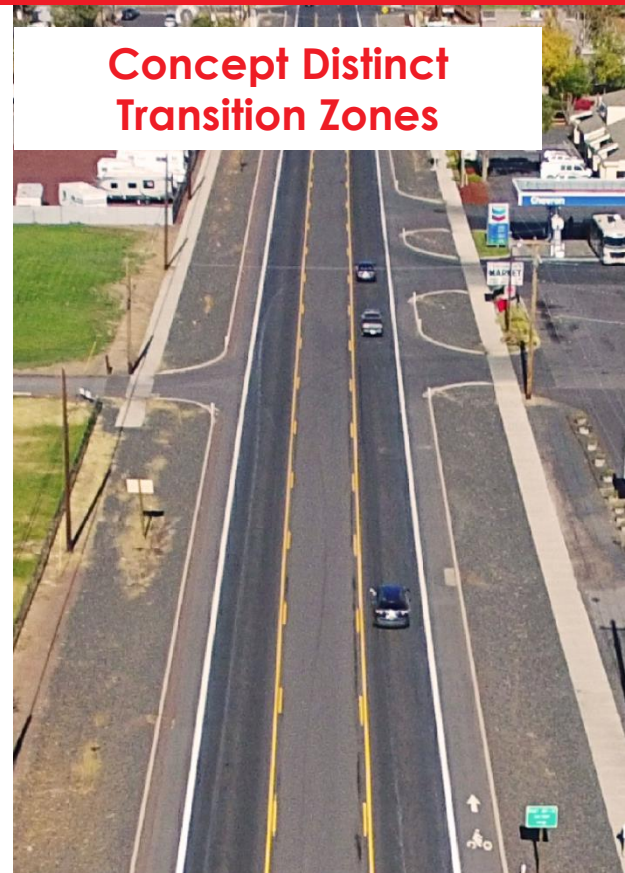
Concept Gateways



Concept Shoulder Treatments



Concept Distinct Transition Zones



Concept Highway Transition Element

Concept Distinct
Transition Zones



Other Potential Project Elements to Examine

Rectangular Rapid Flashing Beacon (RRFB) at
"B" & "C" Avenue



Marked Crosswalk at "C" Avenue



Pedestrian Overcrossing at "B"
Avenue



Concept Highway Transition Questions

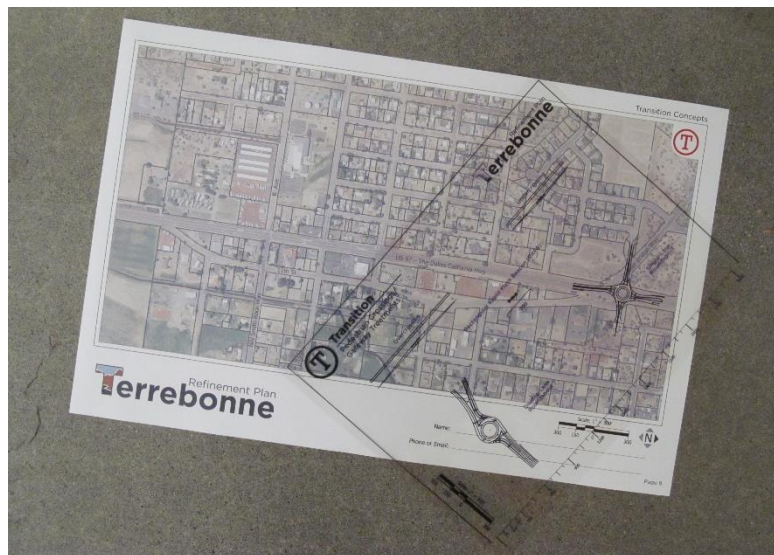
Questions to Consider:

- As a driver, what makes you change speeds when you are on a highway?
- What elements are effective in slowing down drivers?
- How can we improve pedestrian and bicycle crossings of US 97?
- What streetscape is most appropriate for Terrebonne?

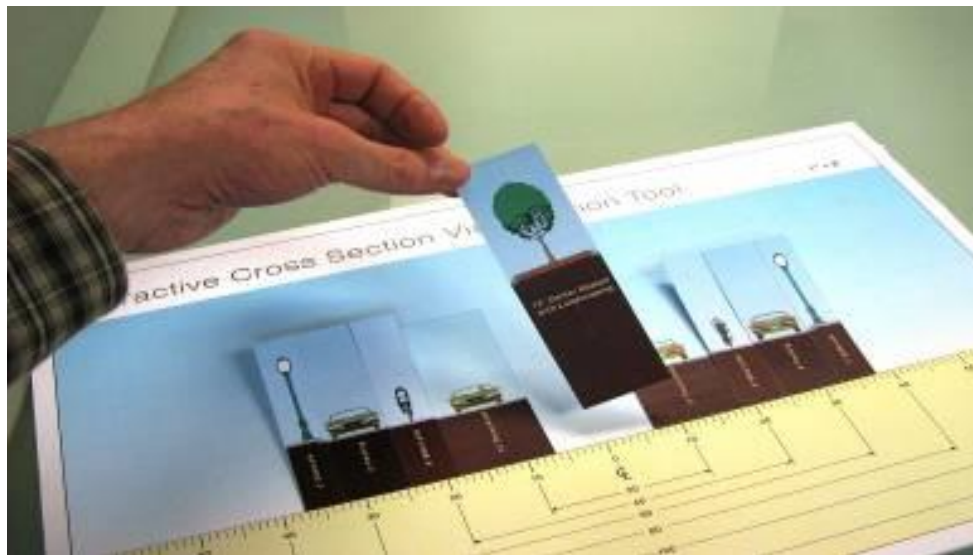
Concept Highway Transition Tools



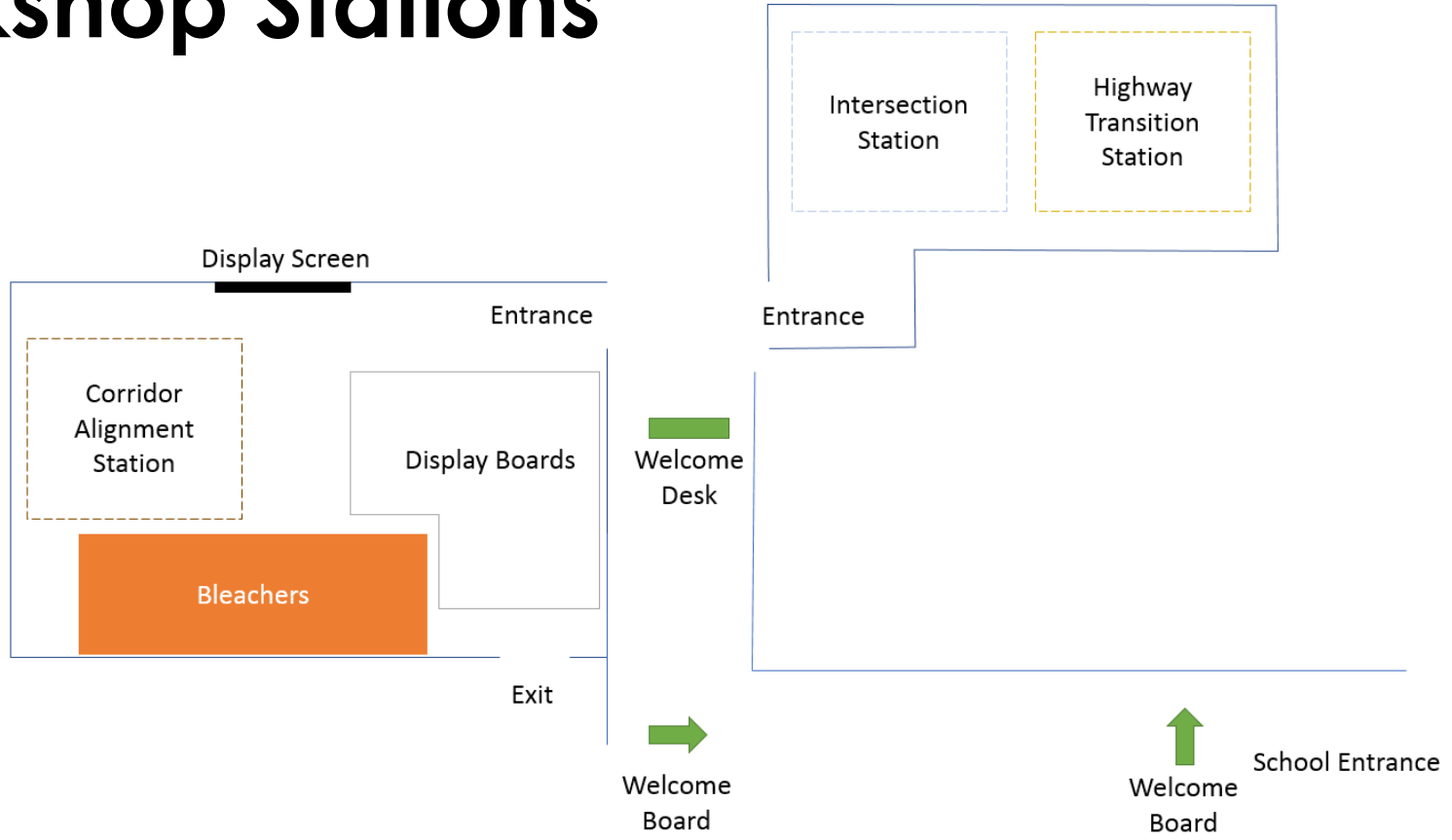
Workbook



Cross Section Builder



Workshop Stations



Workbook

- Stations:
 - Questions
 - Examples
 - Cost Implications
 - Activities
 - Tools



Refinement Plan
Terrebonne

CONCEPT DEVELOPMENT WORKSHOP

September 11th, 2018
6:00-8:00pm

Terrebonne Community School
1199 B Ave
Terrebonne, OR 97760

Welcome!

Please sign in and visit the project display boards in the gym.

Please complete the attached comment form and provide us with your ideas following the presentation!

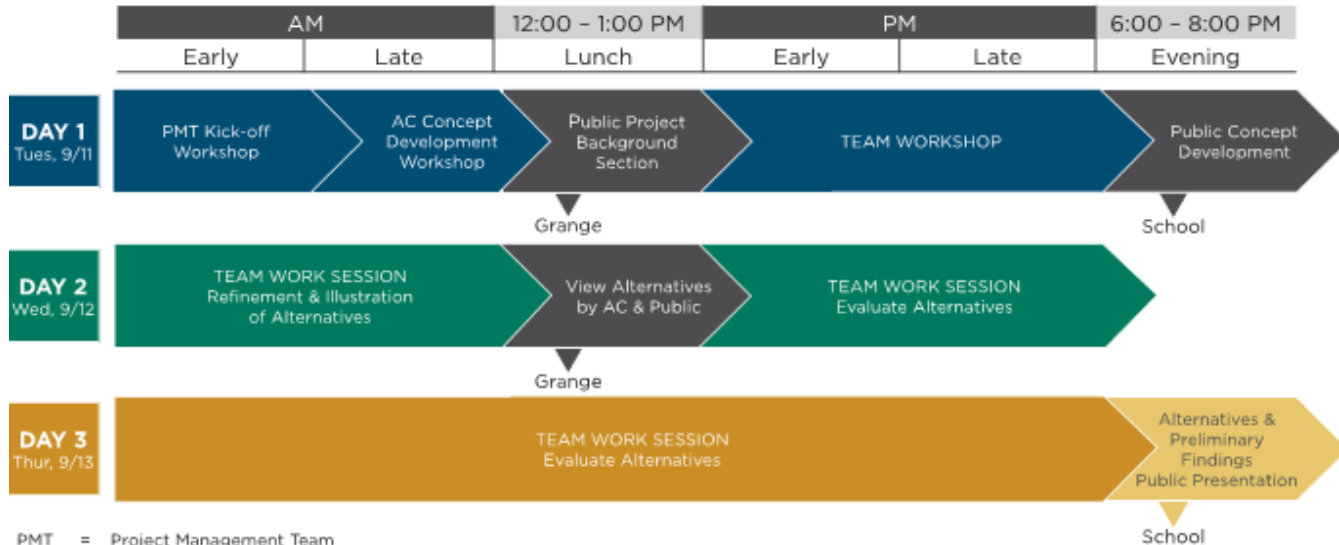
Encourage your friends, neighbors, and coworkers to complete the comment forms online at www.TerrebonneRefinementPlan.com

Thank You!

6:00-6:15 - Visit Display Boards
6:15-6:30 - Presentation
6:30-7:00 - Work Session #1 (Group A, I, or T)
7:00-7:30 - Work Session #2 (Group A, I, or T)
7:30-8:00 - Work Session #3 (Group A, I, or T)
8:00 - Comment form completion and Adjournment



Next Steps & Upcoming Meetings



PMT = Project Management Team

AC = Advisory Committee

- Public Open House #2 – Overview of Draft Preferred Corridor Refinement Plan – January 2019

THANK YOU!